WHAT IS CLAIMED IS:

1. A recording medium for ink including an ink receiving portion for receiving an ink and holding a coloring agent in the ink, comprising:

an increasing region, in which a reactive substance capable of reacting with said coloring agent and holding said coloring agent is present with such a distribution as to increase in the direction of depth of said ink receiving portion, in a position separate from an ink recording surface of said recording medium for ink.

2. A recording medium for ink according to claim 1, wherein said ink receiving portion includes an interface constituting a boundary of two different layers, and said increasing region does not include said interface between the two different layers.

3. A recording medium for ink according to claim 1, wherein said ink receiving portion comprises a decreasing region, in which said reactive substance is present in a such distribution as to decrease in the direction of depth of said ink receiving portion, in a position more separate than said increasing region from said ink recording surface.

4. A recording medium for ink according to any

of claims 1 to 3, wherein said ink receiving portion includes an alumina hydrate layer on the side of said ink recording surface and said increasing region is not present in said alumina hydrate layer.

5. A recording medium for ink according to any of claims 1 to 3, wherein said ink receiving portion includes an alumina hydrate layer on the side of said ink recording surface, and a portion of distribution of the maximum concentration in said increasing region is not present in said alumina hydrate layer.

6. A recording medium for ink according to any of claims 1 to 3, wherein said ink receiving portion includes an interface constituting a boundary of two different layers, and said increasing region is formed by said interface not including said reactive substance.

7. A recording medium for ink according to claim 1, wherein said ink receiving portion includes an ink receiving layer containing at least a pigment for holding a coloring agent of an ink, and a binder for said pigment, said ink receiving layer includes a first layer region in which said binder is crosslinked with a first crosslinking agent and is made uniform relative to said pigment and a second

layer region in which said binder is crosslinked with a second crosslinking agent so as to have a crosslinking degree higher than that in the first layer region, and said first layer region is positioned closer to said ink recording surface than said second layer region.

8. A recording medium for ink according to claim 7, wherein said ink receiving layer is formed by applying a coating liquid which is formed by mixing and dissolving at least alumina hydrate as said pigment for forming the first layer region, polyvinyl alcohol as said binder and orthoboric acid as said first crosslinking agent, on a moist surface containing a tetraborate salt as said second crosslinking agent for forming said second layer region.

9. A recording medium for ink according to claim 8, wherein the content of said orthoboric acid contained in said coating liquid per unit area is less than a content of said sodium tetraborate contained in said moist surface per unit area.

10. A recording medium for ink according to any of claims 7 to 9, wherein said ink receiving layer is 30 g/m^2 or higher.

11. A recording medium for ink according to claim 1, wherein said ink receiving portion includes, in a position closer to said ink recording surface than said increasing region, an ink receiving layer containing at least a pigment for holding a coloring agent of an ink and showing a viscosity change in response to pH, and a binder for said pigment, said ink receiving layer includes a first layer region in which said binder is crosslinked with a first crosslinking agent of a pH value capable of maintaining said pigment at a low viscosity, and a second layer region in which said binder is crosslinked with a second crosslinking agent of a pH value capable of maintaining said pigment at a high viscosity, and said first layer region is positioned closer to said ink recording surface than said second layer region.

12. A recording medium for ink according to claim 11, wherein said second layer region has a crosslinking degree, due to said second crosslinking agent, higher than said first layer region.

13. A recording medium for ink according to claim 11 or 12, wherein said pigment has a low viscosity at a relatively low pH value and changes to a high viscosity at a relatively high pH value, and

said second layer region is formed by applying a coating liquid of a low pH value, prepared by mixing and dissolving said pigment, said binder and said first crosslinking agent, on a moist surface of a high pH value containing said second crosslinking agent.

14. A recording medium for ink according to claim 1, wherein said ink receiving portion includes, in a position closer to said ink recording surface than said increasing region, an ink receiving layer containing at least a pigment capable of holding a coloring agent of an ink and showing a low viscosity at a relatively low pH value and a high viscosity at a relatively high pH value, and a binder for said pigment, said ink receiving layer includes a first layer region in which said binder is crosslinked with a first crosslinking agent of a pH value capable of maintaining said pigment at a low viscosity, and a second layer region in which said binder is crosslinked with a second crosslinking agent of a pH value capable of maintaining said pigment at a high viscosity, and said first layer region is positioned closer to said ink recording surface than said second layer region and has a higher pH value.

15. A substrate for a recording medium for ink

and for forming an ink receiving layer containing at least a pigment for holding a coloring agent of an ink and a binder for said pigment, the substrate comprising:

an increasing region, in which a reactive substance capable of reacting with said coloring agent and holding said coloring agent is present in such a distribution as to increase in the direction of depth, as viewed from a surface on which said ink receiving layer is to be formed.

16. A substrate for a recording medium for ink according to claim 15, wherein said reactive substance is not present on said surface on which said ink receiving layer is to be formed.

17. A method for producing a recording medium for ink including an ink receiving portion for receiving an ink and holding a coloring agent in the ink, the method comprising:

a first step of applying, on a support member on which a water-soluble reactive substance capable of reacting with said coloring agent and holding the coloring agent is formed, an aqueous liquid including a component for forming a porous layer;

a second step of applying, on said porous layer, a second reactive substance for terminating the

reaction of said water-soluble reactive substance; and

a third step of forming, on the surface on which said second reactive substance is formed, an ink receiving layer containing at least a pigment for holding the coloring agent of the ink, and a binder for said pigment.

18. A method for producing a recording medium for ink according to claim 17, wherein said second step utilizes a second crosslinking agent for crosslinking said binder as said second reactive substance, said third step includes a step of applying a coating liquid containing said pigment, said binder and a first crosslinking agent for crosslinking said binder on a moist surface containing said second crosslinking agent, and a crosslinking reaction by the second crosslinking agent at a contact interface between said coating liquid and said moist interface is accelerated more than a crosslinking reaction by said first crosslinking agent in said coating liquid.

19. A method for producing a recording medium for ink according to claim 18, wherein said pigment shows a viscosity change in response to a pH value, said first crosslinking agent provides a pH value for

maintaining said pigment at a low viscosity, said second crosslinking agent provides a pH value for maintaining said pigment at a high viscosity, and a pH change is generated at said contact interface to cause an aggregation of the pigment and a crosslinking of said binder.

20. A method for producing a recording medium for ink according to claim 18, wherein said pigment shows a low viscosity at a relatively low pH value and a high viscosity at a relatively high pH value, said second step utilizes a second crosslinking agent for crosslinking said binder as said second reactive substance, said third step includes a step of applying a coating liquid of a low pH value providing said low viscosity containing said pigment, said binder and a first crosslinking agent for crosslinking said binder on a moist surface containing said second crosslinking agent and having a high pH value providing said high viscosity.

21. A method for producing a recording medium for ink according to any of claims 18 to 20, wherein said moist surface is a liquid surface formed by applying a liquid containing said second crosslinking agent, on a treated surface of a substrate constituting said recording medium for ink, formed by

applying a pre-treatment liquid containing said second crosslinking agent followed by drying to solid.

22. A method for producing a recording medium for ink according to any of claims 18 to 20, wherein said second crosslinking agent is superior in crosslinking reaction to the first crosslinking agent for crosslinking said binder.

23. A method for producing a recording medium for ink according to any of claims 18 to 20, wherein the content of said first crosslinking agent contained in said coating liquid per unit area is less than the content of said second crosslinking agent contained in said moist surface per unit area.

24. A method for producing a recording medium for ink comprising:

a step of forming a water-soluble cationic substance capable of reacting with an anionic coloring agent on a surface of a support member;

a step of applying an aqueous liquid containing a component capable of forming a porous layer on a surface on which said water-soluble cationic substance is formed;

a first surface treatment step of applying, drying and solidifying a first coating liquid

containing at least a crosslinking agent selected from the group consisting of boric acid and borate salts on said porous layer;

a second surface treatment step of applying a second coating liquid containing at least one compound selected from the group consisting of boric acid and borate salts on a solidified surface formed in said first surface treatment step; and

a step of applying a third coating liquid containing at least a pigment, polyvinyl alcohol and at least one crosslinking agent selected from the group consisting of boric acid and borate salts while said second coating liquid maintains a moist state.

25. A method for producing a recording medium for ink according to claim 24, wherein said pigment includes alumina hydrate and said ink receiving layer is 30 g/m^2 or higher.

26. A method for producing a recording medium for ink according to claim 24, further comprising a step of casting the ink receiving layer obtained after said step of applying the third coating liquid.

27. A method for producing a recording medium for ink according to claim 24, wherein said recording medium for ink includes a porous member in which a

liquid component of said coating liquid can permeate, as a substrate for supporting said ink receiving layer.

28. A method for producing a recording medium for ink according to any of claims 24 to 27, wherein said moist surface is not a uniform surface but have a recess for said coating liquid and crosslinking of said binder is caused in said recess.